

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1-44. (canceled)

45. (previously presented) A packaged electronic device, comprising:
a substrate with a first surface having an integrated circuit thereon; and
a nano-particle material adjacent to the first surface.

46. (previously presented) The device of claim 45, wherein the nano-particle material forms a layer contacting the first surface.

47. (previously presented) The device of claim 45, further comprising a polymer packaging layer contacting the first surface.

48. (previously presented) The device of claim 47, wherein the nano-particle material is incorporated into the packaging layer.

49. (previously presented) The device of claim 47, wherein the packaging layer is between the first surface and the nano-particle material.

50. (previously presented) The device of claim 45, wherein the nano-particle material is thixotropic.

51. (previously presented) An optical device comprising:
an enclosure with an opening;
a photonic device within the enclosure;
a lid covering the opening; and
a nano-particle material between the lid and the enclosure.

52. (previously presented) The optical device of claim 51, wherein the nano-particle material provides a hermetic seal between the enclosure and the lid.

53. (previously presented) The optical device of claim 52, wherein the nano-particle material allows for relative motion between the lid and the cover while maintaining the hermetic seal.

54. (previously presented) The optical device of claim 51, wherein the nano-particle material comprises a material with a low Young's Modulus.

55. (previously presented) The device of claim 51, wherein the nano-particle material is thixotropic.

56. (currently amended) A micro-fabricated structure, comprising:
a substrate having a first surface;
a micro-fabricated device positioned on the first surface of the substrate;
an intermediate layer with a first surface and a second surface, wherein the first surface of the intermediate layer is opposite the second surface of the intermediate layer, wherein the first surface of the intermediate layer is positioned adjacent to the first surface of the substrate, and wherein the intermediate layer substantially surrounds the device; and
a first nano-particle material layer that forms a hermetic seal between the substrate and the intermediate layer.

57. (canceled)

58. (currently amended) The micro-fabricated structure of claim [[57]] 56, wherein the first nano-particle material layer is capable of absorbing moisture from surfaces it contacts.

59. (previously presented) The micro-fabricated structure of claim 56, further comprising a second nano-particle layer positioned between the substrate and the first surface of the intermediate layer.

60. (previously presented) The micro-fabricated structure of claim 56, wherein the substrate comprises any of a ceramic material, and an optically transparent material.

61. (previously presented) The micro-fabricated structure of claim 56, wherein the intermediate layer comprises an optically transparent material.

62. (previously presented) The device of claim 56, wherein the first nano-particle material layer is thixotropic.